NEW CLAIMS

I claim:

31. An internal combustion gas turbine engine for producing high velocity exhaust gases via single stage expansion through bladeless nozzles comprising:

a rotating pressure vessel with one or more nozzles with a substantially tangential orientation mounted on the periphery of and in communication with said pressure vessel wherein said nozzles produce reaction thrust torque from single stage expansion of combustion gases through said nozzles;

a compressor of the dynamic type comprised of one or more stages selected from a group including both centrifugal flow and axial flow stages wherein one or more rotor stages are mounted on and powered by an external shell attached directly to said pressure vessel thereby allowing for a rotating means of communication between said pressure vessel and said compressor;

one or more combustors located inside of said rotating pressure vessel;

a means for providing fuel to said combustors;

a means for mixing and combusting said fuel and air in said combustors;

32. The gas turbine engine of claim 31 wherein one or more stages of said dynamic compressor is of the axial flow type with said rotor stages attached to said external rotating shell.

33. The gas turbine of claim 31 wherein one or more stages of said dynamic compressor are of the centrifugal radial flow type with said rotor stages fixed to said external rotating shell.

34. The gas turbine of claim 31 wherein said combustors are located upstream of said nozzles in a substantially axial direction.

35. The gas turbine of claim 31 wherein said combustors are located with a substantially radial orientation between said nozzles and the center of rotation.

36. The gas turbine engine of claim 31 wherein said nozzles are oriented substantially toward an impulse turbine of one or more stages wherein the kinetic energy remaining in the gas jets is converted to rotational shaft energy.

37. The gas turbine engine of claim 32 wherein said nozzles are oriented substantially toward an impulse turbine of one or more stages wherein the kinetic energy remaining in the gas jets is converted to rotational shaft energy.

38. The gas turbine engine of claim 33 wherein said nozzles are oriented substantially toward an impulse turbine of one or more stages wherein the kinetic energy remaining in the gas jets is converted to rotational shaft energy.

39. The engine of claim 36 wherein said impulse turbine is located in a substantially axial direction from said nozzles.

40. The engine of claim 37 wherein said impulse turbine is located in a substantially axial direction from said nozzles.

41. The engine of claim 38 wherein said impulse turbine is located in a substantially axial direction from said nozzles.

42. The gas turbine engine of claim 31 for high speed propulsion wherein said nozzles are oriented substantially toward stator blading wherein the kinetic energy in the exaust gases is redirected in the axial direction.

43. The gas turbine engine of claim 32 for high speed propulsion wherein said nozzles are oriented substantially toward stator blading wherein the kinetic energy in the exaust gases is redirected in the axial direction.

44. The gas turbine engine of claim 33 for high speed propulsion wherein said nozzles are oriented substantially toward stator blading wherein the kinetic energy in the exaust gases is redirected in the axial direction.

45. The gas turbine engine of claim 42 for high speed propulsion wherein said nozzles are oriented substantially axially toward stator blading wherein the kinetic energy in the exaust gases is redirected in the axial direction.

46. The gas turbine engine of claim 43 for high speed propulsion wherein said nozzles are oriented substantially axially toward stator blading wherein the kinetic energy in the exaust gases is redirected in the axial direction.

47. The gas turbine engine of claim 44 for high speed propulsion wherein said nozzles are oriented substantially axially toward stator blading wherein the kinetic energy in the exaust gases is redirected in the axial direction.

48. The gas turbine of claim 42 with an additional nozzle oriented axially on the center of rotation for axial thrust propulsion.

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Bret Cahill